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ABSTRACT

People exposed to stressful experiences should be less negatively affected if they receive higher rather than lower levels of social support. This proposition was tested by investigating the "stress buffering" role of social support in a way that allowed comparison between conceptually different measures related to the construct of support. Results indicate that the quantity of helping behavior received and the number of helpers in the support network are not the critical features of social support. Support that is rated as satisfying, however, does provide effective assistance in coping with stress. The kinds of support received in different stress situations and the individual's ability to use this support are logical foci for further research. (Author/CS)

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Social Support as a Stress-Buffer:
A Multi-method Investigation

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Social Support as a Stress Buffer:
A Multi-method Investigation

It has been suggested that the help and assistance people receive from their naturally existing support systems can buffer the effects of stress (Cobb, 1976). That is, people exposed to stressful experiences will be less negatively effected if they receive higher rather than lower levels of social support. The empirical literature on the stress buffering role of social support, however, is mixed. While there are a number of encouraging findings (Eaton, 1978; Nuckolls, Cassell & Kaplan, 1972; Wilcox, 1979) there are also ambiguous (Lieberman & Mullan, 1978) and even opposite findings (Pearlin & Schooler, 1978).

One methodological problem which has critically limited understanding of the effects of social support is measurement of the construct (Dean & Lin, 1977). Illustratively, in stress buffering studies, social support has been assessed using a range of conceptually different instruments: presence versus absence of a key family member (Eaton, 1978), help seeking (Lieberman & Mullan, 1978), subjective perceptions of relationships with family and community (Nuckolls, Cassel & Kaplan, 1972) and social network variables (Hirsch, 1979). The purpose of the present research is to investigate the stress buffering role of social support in a way which allows comparison between conceptually different measures related to the construct of support.

Method

Instruments

The methods of social support assessment used in this research include (1) social network analysis, (2) satisfaction with received support, and (3) reports of the actual supportive behavioral transactions which occurred. An interview measure of social support network was developed that yielded in-

information concerning the total number of people an individual named as being available for six types of support (talk about private feelings, material aid, advice and information, positive feedback, physical assistance, social participation) and the number who actually supplied this support during the past month (available and actual network size). In addition, a measure of unconflicted support network was developed. The number of people who were identified as both supportive and as a source of negative interaction was subtracted from the total network size to yield this measure. Social support satisfaction was assessed via a six item scale on which subjects reported their level of satisfaction with the support they received in these six areas. Test-retest reliability of each of these measures was found to be satisfactory.

Social support behavioral transactions was measured using a new instrument, the Inventory of Socially Supportive Behaviors (ISSB) (Barrera, Sandler, & Ramsay, 1980). The instrument consists of 40-items describing the broad range of social support described in theoretical (e.g., Caplan, 1974) and empirical studies (e.g., Gottlieb, 1978). Subjects report the frequency of occurrence of each of these supportive transactions during the past month. The instrument has been found to have good internal consistency (coefficient alpha = .94) and test-retest (r = .88) reliability. It also correlates moderately well with other measures of support (e.g., r (43) = .42 with support network size).

Stress was measured as the total number of undesirable life events reported as occurring during the past 12 months (U) and during the past one month (UA). A recently developed instrument the College Student Life Experience Scale (CSLES) (Sandler, 1978), was used to obtain these measures. The scale contains 110 items developed to be a representative sample of significant events which occur to college students. Test-retest reliability of the

measure of undesirable life events has been found to be satisfactory (UA, r (69) = .86; U, r (69) = .89).

The measure of psychological disorder was the BSI (Derogatis, 1977) from which four scales were utilized: somatization, anxiety, depression and the total BSI. Step-wise hierarchical multiple regression analysis was used as the data analytic technique in both studies. The stress buffering role of social support was tested as the significance of variance added by the stress x social support interaction term after entering the main effects of stress and social support (Cohen & Cohen, 1975) in the regression on the disorder variable.

Procedure

Two studies were conducted using college student undergraduates as the subjects. In Study 1 (N=71) the ISSB, CSLES and the BSI were administered. In Study 2 (N=45) the same three instruments were administered along with an interview administration of the social network measure.

Results

In Study 1 the stress buffering role of social support was tested using the ISSB as the measure of social support. Before performing the multiple regression, zero order correlations were computed between all variables. The only significant correlations were between the measures of stress and psychological disorder. There was also a marginally significant relationship between ISSB and the measures of stress (r (69) = .22, p .10). Two significant stress x support interaction effects were obtained in the multiple regression on the anxiety variable (UxISSB, F (1,67) = 6.33, p .05, R^2 change = .07; UAxISSB, F (1,67) = 4.96, p .05, R^2 change = .06). The stress x support interaction was also marginally significant in the regression in the somatization variable (UxISSB, F (1,67) = 3.03, p .10, R^2 change = .04). Dividing the sample at the median on the ISSB and computing the correlations be-

tween stress and disorder yielded the surprising finding that stress correlated more highly with disorder for the high than the low social support group.

Insert Tables 1 and 2 about here

In Study 2 the stress buffering role of each of the support measures (ISSB satisfaction with support (SAT), network available (NET), network utilized (NETU) was assessed. Before performing the multiple regression, zero order correlations were computed between the social support, stress and psychological disorder measures. Stress was significantly correlated with ISSB and marginally related to SAT (r (43) = -.26, p .10). The only significant relationship between the types of social support scales was between the ISSB and network measures (NET r (43) = .42, p .01; NETU r (43) = .32, p .05). The only significant social support correlation with disorder variables was obtained for the satisfaction measure which was negatively related to three of the four measures of symptomatology.

Insert Table 3 and 4 about here

The multiple regression analysis of the stress x ISSB interaction effect was significant for the somatization variable (F (1,41) = 4.75, p .05, R^2 change = .08). Comparisons of the correlations between stress and somatization across high and low ISSB again indicated a stronger relationship for the high ISSB group.[1]

The SAT x stress interaction was significant for the total BSI score (F (1,41) = 5.44, p .05, R^2 change = .07) and for somatization (F (1,41) = 7.86, p .01, R^2 change = .12). For both measures of disorder the correlations between stress and disorder was higher for the low than the high satisfaction group.

Five significant network x stress interactions were significant. In each case the correlations between stress and disorder was higher for the group which reported a larger support network. In order to better understand this finding, the network variable was disagreggated to yield two conceptually different measures. In the interview, subjects had been asked to list people with whom they had unpleasant disagreements or who made them angry or upset. The number of people who were named both as supporters and as a source of unpleasant disagreement was used as a measure of conflicted network size (CONFLICTED). The remainder of the support network was considered to be the size of the unconflicted helping network (UNCONFLICTED). The two measures were not significantly correlated with each other. Zero order intercorrelations of conflicted network size with the other measures in the study indicated a positive relationship with the stress scores (e.g., r (43) = .35, p .05 between available conflicted network and U), a negative relationship with SAT (r (43) = -.33, p .05 between utilized conflicted network and SAT), and a positive relationship with ISSB (r (43) = .30, p .01 between utilized conflicted network and ISSB). Conflicted network utilized also correlated significantly with each of the measures of disorder (e.g., r (43) = .41, p .01 with total BSI). Unconflicted network size was not significantly correlated with measures of stress, disorder or other indicators of social support.

Insert Table 5 about here

The unconflicted network x stress interaction effects were tested using multiple regression analysis. The contribution of the interaction term was not found to be significant in any of these analyses. Thus, the finding of significant stress x total network interactions was felt to be due to the contribution of the conflicted network measure.[2]

Discussion

The results help to elucidate factors which do and do not contribute to the stress buffering effects of support. The dicussion will deal separately with each of the different types of support measures and will indicate directions for further research.

The ISSB as a measure of supportive behaviors actually received is particularly interesting. Despite the high level of interest in social support there has been little research on the effects of the supportive behaviors per se. Before discussing the results using this measure it should be pointed out that the ISSB was positively related to stress at a marginal level in Study 1, and significantly so in Study 2. Thus, the stress x ISSB interaction should be treated cautiously. Despite the ambiguity of interpreting these results they are felt to have instructive value. The failure to obtain a positive stress buffering effect for the ISSB suggests that the sheer quantity of help received is not the critical feature of social support. The kinds of support received in different stress situations and the individuals' ability to utilize this support are logical foci for further research. The finding that stress was more strongly related to disorder under conditions of high than low support, however, does not necessarily indicate that support exacerbates the effects of stress. It is conceivable, for example, that under conditions of high stress, people who experience higher symptom levels seek more support than those with lower symptom levels. The important point to be made is that there is a need for research to focus on the effects of supportive behaviors actually received, and to identify factors which facilitate or reduce their contribution as stress buffers.

The most compelling evidence for a stress buffering effect of support was obtained for the support satisfaction measure. Thus, when the individual perceives that he is receiving the appropriate level of support the negative ef-

fects of stress are not manifested. Further research is needed to investigate what structural characteristics of the support given lead to satisfaction with support.

The results obtained using the support network measures are instructive in several ways. The total quantity of available or utilized helpers does not appear to be critical to the stress buffering effect of the network. This is similar to the point made in the discussion of the results obtained for the ISSB: greater quantity apparently does not lead to greater quality of help. The identification of a "conflicted" support network provides some leads as to one qualitatively meaningful dimension of support network size. The size of the conflicted support network was negatively related to support satisfaction, positively related to symptoms and is believed to be responsible for the negative stress buffer effect obtained using the total network measure.

At a more general level the study indicates the importance of a multimethod approach to research on the effects of social support. Each of the social support measures used in the current study assesses a different aspect of this construct (help received, satisfaction with help, network size). While each of these types of measures is important in its own right, it is suggested that progress in our understanding of the effects of support will be facilitated by further study of their interrelationships.

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Footnotes

1. The significant correlation between ISSB and stress for this sample precludes a clear interpretation of this interpretation of this interaction effect. The data are presented, however, as a partial replication of the findings from Study 1. The limitations on interpreting the results are presented in the discussion section.

2. The significant correlation between conflicted network size and stress precludes a clearly interpretable test of their interaction on the measures of maladjustment. The interactions were tested, however, and four significant effects were obtained, all indicating that stress was more highly related to disorder when conflicted network size was high.

Table 1

Hierarchical Regression Analyses for Significant
Stress x Support Interaction Effects

Study 1 (N=71)
Social Support Received (ISSB)

Criterion	Predictors	Multiple R	R^2 Change	df	F
Anxiety	U	.33	.11	1,69	8.85**
	ISSB	.36	.01	1,68	1.32
	UxISSB	.45	.07	1,67	6.33*
Anxiety	UA	.32	.10	1,69	8.02**
	ISSB	.34	.01	1,68	1.34
	UAxISSB	.42	.06	1,67	4.96*

Study 2 (N=45)
Social Support Received (ISSB)

Somatization	U	.21	.04	1,43	2.12
	ISSB	.21	.00	1,42	.01
	UxISSB	.37	.09	1,41	4.41*

Satisfaction with Support (SAT)

BSI	UA	.46	.21	1,43	11.65**
	SAT	.57	.11	1,42	7.44**
	UAxSAT	.64	.07	1,41	5.44*
Somatization	UA	.43	.18	1,43	9.98**
	SAT	.45	.01	1,42	.99
	UAxSAT	.57	.12	1,41	7.86**

Table 1 (cont.)

Criterion	Predictors	Multiple R	R^2 Change	df	F
		Available Network Size (NET)			
Somatization	U	.21	.04	1,43	2.12
	NET	.22	.00	1,42	.14
	UxNET	.53	.23	1,41	13.45**
BSI	U	.57	.33	1,43	21.30**
	NET	.58	.00	1,42	.59
	UxNET	.63	.06	1,41	4.12*
Somatization	UA	.43	.18	1,43	9.98**
	NET	.43	.00	1,42	.00
	UAxNET	.52	.08	1,41	4.75*
		Utilized Network Size (NETU)			
Somatization	U	.21	.04	1,43	2.12
	NETU	.21	.00	1,42	.00
	UxNETU	.49	.19	1,41	10.76**
Somatization	UA	.43	.18	1,43	9.98**
	NETU	.43	.00	1,42	.03
	UAxNETU	.52	.08	1,41	4.98*

Note: U = Total undesirable events in past 12 months.

UA = Total undesirable events in past one month.

* $p < .05$

** $p < .01$

Table 2

Correlations Between Stress and Symptoms
Across Support Levels

Support Measure	n	Somatization		Anxiety		BSI Total	
		U	UA	U	UA	U	UA
			Study 1 (N=71)				
ISSB-Hi	35	.38*	.41*	.43*	.43**		
ISSB-Lo	36	.16	.09	.17	.09		
			Study 2 (N=45)				
ISSB-Hi	22	.39					
ISSB-Lo	22	-.24					
SAT-Hi	29		.22				.33
SAT-Lo	16		.71**				.65**
NET-Hi	24	.44*	.63**			.66**	
NET-Lo	21	.00	.24			.47*	
NETU-Hi	24	.44*	.65**				
NETU-Lo	21	-.03	.20				

* $p < .05$

** $p < .01$

Note: ISSB = Inventory of Socially Supportive Behaviors

SAT = Support Satisfaction

NET = Available Network Size

NETU = Utilized Network Size

Table 3

Correlations of Social Support Measures and Negative Events with Maladjustment

Study 2, (N=45)

	U	UA	ISSB	NET	NETU	SAT
Total BSI	.57**	.46**	.06	-.02	.00	-.41**
Anxiety	.51**	.26	.18	-.09	-.02	-.32*
Depression	.67**	.58**	.07	.01	-.03	-.36*
Somatization	.21	.43**	.05	.08	.02	-.20

* p .05

** p .01

Note: U = Total undesirable events in past 12 months.

UA = Total undesirable events in past month.

ISSB = Inventory of Socially Supportive Behaviors

NET = Available Network Size

NETU = Utilized Network Size

SAT = Support Satisfaction

Table 4

Intercorrelation of Social Support and

Negative Events Measures

Study 2, (N=45)

	U	UA	ISSB	NET	NETU	SAT
U		.75**	.33*	.12	.08	-.26
UA			.38*	.19	.12	-.15
ISSB				.42**	.32*	.01
NET					.92**	.05
NETU						.04

* p .05

** p .01

Note: U = Total undesirable events in past 12 months.

UA = Total undesirable events in past month.

ISSB = Inventory of Socially Supportive Behaviors

NET = Available Network Size

NETU = Utilized Network Size

SAT = Support Satisfaction

Table 5

Correlations Between Measures of Network Size, Stress, Social Support and Maladjustment

Study 2, (N=45)

	Available Network			Utilized Network		
	Conflicted	Unconflicted	Total	Conflicted	Unconflicted	Total
U	.35*	-.10	.12	.45**	-.18	.08
UA	.31*	.01	.19	.37*	-.08	.12
Anxiety	.22	-.26	-.09	.35*	-.24	-.02
Depression	.25	-.15	.01	.32	-.23	-.03
Somatization	.23	-.06	.08	.29	-.14	.02
BSI	.27	-.21	-.02	.41**	-.25	.00
ISSB	.35*	.24	.42**	.30*	.16	.32*
SAT	-.24	.22	.05	-.33*	.25	.04

* $p < .05$

** $p < .01$

Note: U = Total undesirable events in past 12 months.

UA = Total undesirable events in past month.

ISSB = Inventory of Socially Supportive Behaviors

NET = Available Network Size

NETU = Utilized Network Size

SAT = Support Satisfaction